AMENDMENTS TO THE SPECIFICATION

Please replace the third full paragraph on page 40 with the following amended paragraph:

Next, assumption conditions on which the invention is premised, a used theory, and fundamental expressions will be briefly described with reference to Figs. ~~4(A)-(C)~~4(A)-4(C) and 5. Fig. 4(A) is a view showing the appearance of a wire harness, Fig. 4(B) is a view showing a state of digitizing the wire harness of Fig. 4(A), and Fig. 4(C) is a view expressing the wire harness of Fig. 4(A) by beam elements and nodes. Fig. 5 is a view illustrating degrees of freedom in a wire harness expressed by beam elements and nodes.

Please replace the second full paragraph on page 46 with the following amended paragraph:

Hereinafter, matching conditions and balancing conditions will be described with reference to Figs. 6(A)-6(B)~~Fig. 6~~. Fig. 6(A) is a view expressing a wire harness by three beam elements, and Fig. 6(B) is a view showing a state where the three beam elements of Fig. 6(A) are coupled together.

Please replace the paragraph bridging pages 57 and 58 with the following amended paragraph:

In the invention, as shown in Fig. 9, a well-known personal computer which basically includes a microcomputer 41, an input device 42, a display device 43, a print device 44, a storage device 45, a read device 46, and a communication interface 47 may be used. The microcomputer 41 includes: a CPU 41a (Central Processing Unit); a ROM 41b which stores a boot program and the like; and a RAM 41c which temporarily stores various process results. The input device 42 is a keyboard through which the values are input, a mouse, or the like, the display device 43 is a

CRT on which the process results are displayed, or the like, and the print device 44 is a printer which prints out the process results. The storage device 45 is a hard disk drive which stores application programs and the process results. The read device 46 is a device for reading a twist angle calculation program 48a which is stored in a storage medium 48 such as a CD or a DVD, and which indicates a process procedure shown in Figs. 10, 11(A)-11(C)~~11(A)-(C)~~, 14, 16, and 20. The communication interface 47 is a modem board or the like which conducts data communication with an external device with using, for example, a LAN line. These constituent components are connected to one another through an internal bus 49.

Please replace the second full paragraph on page 58 with the following amended paragraph:

The twist angle calculation program 48a which is stored in the storage medium 48 ~~corresponds to claims 13, 17, and 22~~, and a processing apparatus such as a personal computer in which the twist angle calculation program 48a is installed~~corresponds to claims 12, 16, and 21~~. The twist angle calculation program 48a may be provided not only by the storage medium 48 but also through a communication line such as the Internet or a LAN.

Please replace the paragraph bridging pages 58 and 59 with the following amended paragraph:

Furthermore, process procedures in embodiments of the invention will be described with reference to Figs. ~~10 to 23~~10, 11(A), 11(B), 11(C), 12(A), 12(B), 12(C), 12(D), 12(E), 13, 14, 15(A), 15(B), 15(C), 15(D), 16, 17, 18, 19,20, 21, 22(A), 22(B), 22(C). Particularly, Figs. 10, 11(A), 11(B), 11(C), 12(A), 12(B), 12(C), 12(D), 12(E) and 13~~10 to 13~~ show a first embodiment of the invention, Figs. 14 and 15(A)-15(D)~~15(A)-(D)~~ are views showing a second embodiment of

the invention. Figs. 16 to 19 show a third embodiment of the invention, and Figs 20, 21, 22(A), 22(B) and 22(C)~~20-23~~ are views showing a fourth embodiment of the invention.

Please replace the first full paragraph on page 68 with the following amended paragraph:

Although a clamp that may produce a twist in the trunk wire of the wire harness which is exemplarily shown in Figs. 15(A)-15(D)~~15(A)-(D)~~ is not attached to the trunk wire, twist angles in a wire harness to which also a clamp that may produce a twist in such a trunk wire together with branch wires is attached can be similarly calculated ~~(corresponding to claim 10)~~. In this case, for example, an angle such as shown in the first embodiment which is formed by a clamp axis and the reference plane 6 is obtained as a twist angle. This is effective in design of a jig plate which further matches the actual state, production of a wire harness, and the like. Similarly, also twist angles in a wire harness in which only the clamps are attached to a trunk wire can be calculated ~~(corresponding to claim 11)~~. This is effective in design of a jig plate for a wire harness in which a large number of clamps are used, production of such a wire harness, and the like.

Please replace the second full paragraph on page 73 with the following amended paragraph:

Although the above description is focused on the twist angles of the clamps, also twist angles in the branch nodes N5, N10, and N16 of the branch wires 100bl to 100b3 can be similarly obtained on the basis of the virtual clamp axis and the reference axis ~~(corresponding to claim 15)~~.

Before Claim 1, please insert the following phrase:

We claim: